



Meeting Agenda

Wednesday, November 7, 2018 @ 1:00 PM
Aeronautics Building – 2nd Floor Commission Room
2700 Port Lansing Rd., Lansing, MI

1. **Welcome - Call to Order – Introductions**
2. **Changes or Additions to the Agenda (*Action Item as needed*)** *Any items under the Consent Agenda may be moved to the regular agenda upon request of any Council member, member of the public or staff member.*
3. **Public Comments on Non-Agenda Item**
4. **Consent Agenda (*Action Item*)**
 - 4.1. Approval of the September 5, 2018 Meeting Minutes (*Attachment 1*)
 - 4.2. Forbes Report: Michigan Infrastructure Plan Article (*Attachment 2*)
 - 4.3. Press Release – TAMC Receives Special Tribute from Governor Snyder (*Attachment 3*)
 - 4.4. Press Release – WAMC Membership Announcement (*Attachment 4*)
5. **TAMC Budget Update (*Attachment 5*) (*Action Item*)**
 - 5.1. TAMC Financial Report
 - 5.2. Michigan Technological University FY2018 Activities Contract Modification Request
 - 5.3. Northeast Michigan Council of Governments FY2018 Asset Management Contract Modification Request
6. **Old Business**
 - 5.1. TAMC Work Program Update – Kent (*Attachment 6*)
7. **MIC Update - Johnson**
 - 6.1. MIC Website <https://www.michigan.gov/mic/>
8. **Committee Review & Discussion Items**
 - 8.1. **Data Committee – McEntee**
 - 8.1.1. Planning Methods for Creating Schedule of Asset Management Plan Submittals of Top 123 Agencies – *McEntee*
 - 8.1.2. IRT-ADARS Compliance Report – *Belknap*
 - 8.1.3. Status of 2018 PASER Data Collection – *Belknap*
 - 8.2. **ACE Committee – Start**
 - 8.2.1. TAMC Data Sharing Policy Update - *Start*
 - 8.2.2. TAMP Template Update - *Colling*
 - 8.2.3. Training Schedule Update - TAMC Members Participation - *Belknap*
 - 8.3. **Bridge Committee – Disselkoen/Mekjian/McEntee/Wieferich**
 - 8.3.1. Culvert Pilot Project Summary Report – *Belknap* (*Attachment 7*)
 - 8.3.2. Culvert Pilot Report Next Steps?
 - 8.4. **Michigan Center for Shared Solutions – Surber/Holmes**
 - 8.5. **Michigan Technological University/Technical Assistance – Colling**
 - 8.5.1. Monthly Training Report (August) (*Attachment 8*)
 - 8.5.2. Monthly Activities Report (August) (*Attachment 9*)
9. **Public Comments**
10. **Member Comments**
11. **Adjournment: Next meeting December 5, 2018 at 1:00 PM – Aeronautics 2nd Floor Commission Room, 2700 Port Lansing Rd., Lansing, MI**

Meeting Telephone Conference Line: 1-877-336-1828 Access Code: 8553654#

Chair: Joanna Johnson, CRA: Vice-Chair: Bill McEntee, CRA: Bob Slattery, MML: Gary Mekjian, MML: Jon Start, MTPA: Brad Wieferich, MDOT: Don Disselkoen, MAC: Derek Bradshaw, MAR: Jennifer Tubbs, MTA: Rob Surber, MCSS

TRANSPORTATION ASSET MANAGEMENT COUNCIL

September 5, 2018 at 1:00 p.m.

MDOT Aeronautics Building, 2nd Floor Commission Room

2700 Port Lansing Road

Lansing, Michigan

MINUTES

**** Frequently Used Acronyms List attached**

Members Present:

Derek Bradshaw, MAR/GLS Region V
Joanna Johnson, CRA/RCKC – Chair
Bob Slattery, MML
Jennifer Tubbs, MTA

Don Disselkoen, MAC
Bill McEntee, CRA – Vice-Chair
Jonathan Start, MTPA/KATS
Brad Wieferich, MDOT

Support Staff Present:

Niles Annelin, MDOT
Dave Berridge, MDOT
Rebecca Curtis, MDOT
Polly Kent, MDOT
Michael Toth, MDOT

Roger Belknap, MDOT
Tim Colling, MTU
Cheryl Granger, DTMB/CSS
Gloria Strong, MDOT

Public Present:

Jessica Moy, MI Dept. of Treasury/MIC
Dirk Heckman, Mackinac County Road Commission

Members Absent:

Gary Mekjian, MML
Rob Surber, DTMB/CSS

1. Welcome – Call-To-Order:

The meeting was called-to-order at 1:03 p.m. Everyone was welcomed and introduced. Jessica Moy introduced herself. She is an employee of the Michigan Department of Treasury and the Executive Director for the Michigan Infrastructure Council.

2. Changes or Additions to the Agenda (Action Item):

None

3. Public Comments on Non-Agenda Items:

None

4. Guest Presentation:

4.1. – MDOT Transportation Asset Management Plan (TAMP) – D. Berridge

D. Berridge gave a PowerPoint presentation regarding the initial TAMP certified in July 2018. The assets include the National Highway System (NHS), Interstate and Non-interstate, and NHS Bridges. There are seven chapters in the TAMP that were reviewed: 1.) Program Development Call for Projects Process, 2.) Life Cycle Planning, 3.) Risk Management Process, 4.) Inventory and Condition Analysis, 5.) Financial Plan, 6.) Investment Strategies, and 7.) Performance Gap Analysis. A copy of the Initial TAMP Certified July 2018 was provided to everyone present.

5. Consent Agenda (Action Item):

5.1. – Approval of the August 1, 2018 Meeting Minutes (Attachment 1)

5.2. – TAMC Financial Report (Attachment 2)

R. Belknap provided an updated financial report (August 30, 2018) for the Councils review.

5.3. – TAMC Fall Conference – Save-the-Date – October 23, 2018, Ramada Inn of Marquette (Attachment 3)

The 2018 Fall Conference will be held on October 23, 2018, at the Ramada Inn of Marquette. The Save-the-Date was recently distributed. R. Belknap is working on getting presenters for the conference.

5.4. – Roadsoft Users Conference – RUCUS, September 26, 2018, DoubleTree Resort, Grand Rapids (Attachment 4)

Motion: J. Start made a motion to approve the Consent Agenda as presented; J. Tubbs seconded the motion. The motion was approved by all members present.

6. Old Business:

6.1. – 2018 Strategic Planning Summary (Attachment 5) (Action Item)

A copy of the draft 2018 Strategic Planning Session held on June 6, 2018, was shared with the Council

Motion: D. Disselkoe made a motion to approve the amended TAMC June 6, 2018 Draft Strategic Planning Session Summary as presented; R. Slattery seconded the motion. The motion was approved by all members present.

7. - New Business:

7.1. - Election of TAMC Chair and Vice Chair (Action Item)

Motions: R. Slattery made a nomination for J. Johnson to continue to serve as TAMC Chair; D. Disselkoe seconded her nomination. The motion was approved by all members present. J. Tubbs moved that nominations be closed for unanimous ballot. J. Start seconded to cast unanimous ballot for B. McEntee to be elected as Vice-Chair; B. Wieferich raised the question of possibly bringing more diversity to the leadership, as both Chair and Vice Chair represent CRA, but other members were content to continue with the arrangement. The motion for B. McEntee to serve as TAMC Vice Chair was approved by all members present.

7.2. – Public Act 325/HB 5408 Asset Management Plans – P. Kent (Attachment 6)

P. Kent gave a detailed review of PA 325 and HB 5408. She shared a timeline (HB 5408 TAMC Analysis and Calendar) prepared just before the bill was enacted. In Section 3, part of TAMC's charge is to develop a strategy and tools for data collection on culverts and traffic signals, and until those are complete, it is not practical to ask local agencies to include those elements in their asset management plans. TAMC needs to make the locals aware that the first asset management plans are not due until year 2020. TAMC is responsible for developing a template for asset management plans by October 2019, and for developing a three-year schedule for submission of asset management plans by the required agencies.

Section 10 talks about the asset management plan in more detail. Local agencies with 100 miles or more of road are required to do an asset management plan. Local agency asset management plans only need place holder sections which outline the current status of data collection and asset management for culverts and signals. Local agencies who have not already developed an asset management plan for signals and culverts are advised to wait for TAMC to issue guidance on data collection for culverts and traffic signals at a future date.

It was asked that all Council members approach their representing agencies and ask for volunteers or give feedback on who should be the first one-third of agencies to submit asset management plans. It was also suggested that a letter be sent out to the top 123 agencies informing them that they are in fact in the top 123 agencies. These are agencies that have 100 miles or more of local roads. Some may not be aware that they in the top 123.

Action Item: A letter from the Council will need to go out to the County Road Association and other organizations directly involved giving guidance. J. Johnson will draft a letter to let local agencies know not to worry, provide a summary of HB 5408, and let them know that they may be chosen to provide an asset management plan.

8. Committee Reviews and Discussion Items:

8.1. – Data Committee – B. McEntee

8.1.1. – Memorandum for 2019 Non-federal Aid Data Collection – B. McEntee (Attachment 7)

A memo was sent to transportation agencies and regional/metropolitan planning organizations dated August 23, 2018 regarding the Collection of Roadway Surface Condition Data on Non-federal aid Roads for Reimbursement Deadline for Applications – October 2018. This letter helps TAMC be as transparent as possible. One item that may need to be clarified is the data collection fiscal year end. This is something that needs to be reviewed.

8.1.2. – Planning Methods for Creating Schedule of Asset Management Plan Submittals of Top 123 Agencies – B. McEntee

See agenda item 7. By year 2020, no agencies will have an active asset management plan currently on file.

8.1.3. – IRT/ADARS Compliance Report – R. Belknap (Attachment 8)

Agencies continue to do well on their entries. R. Belknap did a brief review of his handout “Summary Statistics – TAMC Investment Reporting Compliance as of August 31, 2018.”

8.1.4. – Status of 2018 PASER Data Collection – R. Belknap (Attachment 9)

R. Belknap gave a brief update on the 2018 PASER data collection. He reviewed his handout “2018 – PASER Status by County as of August 27, 2018.”

B. McEntee mentioned that CSS has requested additional information to put behind the tiles on the MIC Website. B. McEntee will send CSS some additional information.

B. McEntee asked MTU to look at the IBR usage to be used in next year’s annual report. More conversation will be held on this at a later date.

Action Item: B. McEntee will send CSS additional information for the tiles on the MIC Website.

8.2. – ACE Committee – J. Start

8.2.1. – Establishing a TAMC Data Sharing Policy – J. Start

The ACE Committee was tasked by the TAMC full Council to pull together a Data Sharing Policy. This was discussed in today’s ACE Committee meeting this morning. MDOT support staff will pull together a draft policy for the Committee’s review. Support staff will also talk to the MDOT FOIA Office to find out how to handle FOIA requests in the policy.

The ACE Committee discussed “*The Bridge*” article. The next article will be done by MTU and they will use the Executive Summary out of the Culvert Pilot Project Report and add in some interviews to complete the article. The article after that will be about the MIC.

8.2.2. – Training Schedule Update, TAMC Participation – R. Belknap

CSS has started to pull together their 2019 IRT trainings. They will do five Webinars and five on-site trainings between Sault St. Marie and Southeast Michigan. Dirk Heckman, from the Mackinac County Road Commission, made a suggestion that MTU and CSS hold their PASER and IRT trainings on the same day and location to save people time and effort to get to the trainings. ACE Committee liked the suggestion and MTU and CSS will work together to see if they can create a schedule.

8.3. - Bridge Committee Update – J. Johnson/B. McEntee/D. Disselkoen

8.3.1. - Update on the Culvert Pilot Project – MTU

Scott Bershing and Chris Gilbertson, from MTU, have created a draft Culvert Pilot Project Report that was shared with the committee. T. Colling felt the biggest take-away was some of the agencies are already using the culvert data. Seventy-two percent (72%) of the agencies plan on continuing to collect more culvert data. MTU made sure to meet all of the necessary goals as charged.

8.3.2. – Culvert Pilot Project Draft Report – C. Gilbertson and S. Bershing (Attachment 10) (Action Item)

See agenda item 8.3.1.; C. Gilbertson and S. Bershing briefly discussed how they pulled together the draft Culvert Pilot Project Report.

Motion: J. Tubbs mad a motion to approve the draft report with the understanding that the TAMC Bridge Committee will be finalizing the report at their September 17, 2018 Bridge Committee meeting when all of the final edits are placed in the report; D. Bradshaw seconded the motion. The motion was approved by all members present.

After the report is finalized it will be sent to the Governor’s Executive Office the last week in September.

8.4. – Michigan Center for Shared Solutions – C. Granger

8.4.1. – Dashboard Update – C. Granger

Josh Ross, CSS, shared some data analytics for April 1, 2018 – July 3, 2018, with R. Belknap. R. Belknap will add this information to the TAMC Sharepoint site for everyone’s review.

Action Item: S. Bershing and C. Gilbertson, from MTU, will present their draft Final Report at the September 17, 2018, TAMC Bridge Committee meeting for their final approval of the preliminary draft. It is expected that only minor changes will need to be made.

8.4.2. – Website Usage and Analytical Data – C. Granger

CSS has started to apply the new data analytics. CSS’ end of the fiscal year has some funds left and they will begin working on the tasks that B. McEntee asked them to do for the next fiscal year.

CSS is also working on making ADARS to IRT more compatible.

8.5. – Michigan Technological University/Technical Assistance Training Reports – T. Colling

8.5.1. – Monthly Training Report (July 2018) (Attachment 11)

A copy of the August 7, 2018, Training Report for the reporting period of July 1-31, 2018, was shared with the Council and briefly reviewed. MTU is preparing for the Asset Management Plan Workshops. They will prepare a training schedule for the next fiscal year beginning October 1, 2018. They will work with CSS on collaborating the IRT and PASER trainings.

8.5.2. – Monthly Activities Report (July 2018) (Attachment 12)

A copy of the August 7, 2018, Activities Report for the reporting period of July 1-31, 2018, was shared with the Council and reviewed. MTU is very busy with the Culvert Pilot Program. They are working on the Culvert Pilot Program Report that must be finalized by the end of September 2018.

Action Item: MTU will prepare a training schedule for the next fiscal year beginning October 1, 2018. They will collaborate with CSS with doing the IRT and PASER trainings the same data and location.

9. Public Comments:

PASER and Quality Control (QC) – Chan Singh, MDOT staff who previously did the PASER ratings has retired. MDOT has now hired a contractor to do the PASER ratings and QC. Mike Toth of MDOT offered to have the contractors attend a TAMC full council meeting to give a brief report on their strategy. Council members were receptive to that idea. MDOT support staff will check with Gil Chesbro on setting this up.

8. Member Comments:

The last “Bridge” article done with Therese Empie, Strategy Planner with the Governor’s Office, was very good and J. Johnson will send the article to the Council for them to read.

MDOT has not yet named a replacement for Dave Wresinski.

TAMC Full Council will not hold a meeting in October due to the TAMC Fall Conference being held on October 23, 2018 in Marquette.

9. Adjournment:

The meeting adjourned at 3:35 p.m. The next full Council meeting will be held November 7, 2018, at 1:00 p.m., MDOT Aeronautics Building, 2700 Port Lansing Road, 2nd Floor Conference Room, Lansing, Michigan.

TAMC FREQUENTLY USED ACRONYMS:	
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ACE	ADMINISTRATION, COMMUNICATION, AND EDUCATION (TAMC COMMITTEE)
ACT-51	PUBLIC ACT 51 OF 1951-DEFINITION: A CLASSIFICATION SYTEM DESIGNED TO DISTRIBUTE MICHIGAN’S ACT 51 FUNDS. A ROADWAY MUST BE CLASSIFIED ON THE ACT 51 LIST TO RECEIVE STATE MONEY.
ADA	ADULTS WITH DISABILITIES ACT
ADARS	ACT 51 DISTRIBUTION AND REPORTING SYSTEM
BTP	BUREAU OF TRANSPORTATION PLANNING (MDOT)
CPM	CAPITAL PREVENTATIVE MAINTENANCE
CRA	COUNTY ROAD ASSOCIATION (OF MICHIGAN)
CSD	CONTRACT SERVICES DIVISION (MDOT)

CSS	CENTER FOR SHARED SOLUTIONS
DI	DISTRESS INDEX
ESC	EXTENDED SERVICE LIFE
FAST	FIXING AMERICA'S SURFACE TRANSPORTATION ACT
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FOD	FINANCIAL OPERATIONS DIVISION (MDOT)
FY	FISCAL YEAR
GLS REGION V	GENESEE-LAPEER-SHIAWASSEE REGION V PLANNING AND DEVELOPMENT COMMISSION
GVMC	GRAND VALLEY METRO COUNCIL
HPMS	HIGHWAY PERFORMANCE MONITORING SYSTEM
IBR	INVENTORY BASED RATING
IRI	INTERNATIONAL ROUGHNESS INDEX
IRT	INVESTMENT REPORTING TOOL
KATS	KALAMAZOO AREA TRANSPORTATION STUDY
KCRC	KENT COUNTY ROAD COMMISSION
LDC	LAPTOP DATA COLLECTORS
LTAP	LOCAL TECHNICAL ASSISTANCE PROGRAM
MAC	MICHIGAN ASSOCIATION OF COUNTIES
MAP-21	MOVING AHEAD FOR PROGRESS IN THE 21 ST CENTURY (ACT)
MAR	MICHIGAN ASSOCIATION OF REGIONS
MDOT	MICHIGAN DEPARTMENT OF TRANSPORTATION
MDTMB	MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
MIC	MICHIGAN INFRASTRUCTURE COUNCIL
MITA	MICHIGAN INFRASTRUCTURE AND TRANSPORTATION ASSOCIATION
MML	MICHIGAN MUNICIPAL LEAGUE
MPO	METROPOLITAN PLANNING ORGANIZATION
MTA	MICHIGAN TOWNSHIPS ASSOCIATION
MTF	MICHIGAN TRANSPORTATION FUNDS
MTPA	MICHIGAN TRANSPORTATION PLANNING ASSOCIATION
MTU	MICHIGAN TECHNOLOGICAL UNIVERSITY
NBI	NATIONAL BRIDGE INVENTORY
NBIS	NATIONAL BRIDGE INSPECTION STANDARDS
NFA	NON-FEDERAL AID
NFC	NATIONAL FUNCTIONAL CLASSIFICATION
NHS	NATIONAL HIGHWAY SYSTEM
PASER	PAVEMENT SURFACE EVALUATION AND RATING
PNFA	PAVED NON-FEDERAL AID
PWA	PUBLIC WORKS ASSOCIATION
QA/QC	QUALITY ASSURANCE/QUALITY CONTROL
RBI	Road Based Inventory
RCKC	ROAD COMMISSION OF KALAMAZOO COUNTY
ROW	RIGHT-OF-WAY
RPA	REGIONAL PLANNING AGENCY
RPO	REGIONAL PLANNING ORGANIZATION
SEMCOG	SOUTHEAST MICHIGAN COUNCIL OF GOVERNMENTS
STC	STATE TRANSPORTATION COMMISSION
STP	STATE TRANSPORTATION PROGRAM
TAMC	TRANSPORTATION ASSET MANAGEMENT COUNCIL
TAMCSD	TRANSPORTATION ASSET MANAGEMENT COUNCIL SUPPORT DIVISION
TAMP	TRANSPORTATION ASSET MANAGEMENT PLAN
TPM	TRANSPORTATION PERFORMANCE MEASURES
UWP	UNIFIED WORK PROGRAM

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2,574 views | Oct 24, 2018, 08:00am

Why Michigan's Infrastructure Plan May Be The Pace Car For The Country



Cherian George CommunityVoice
Forbes Finance Council CommunityVoice ⓘ

POST WRITTEN BY

Cherian George

Managing Director and Head of the Americas in [Fitch Ratings](#)' global infrastructure and project finance group.



Getty

Michigan may be accomplishing something for its long-term development and economic competitiveness that the country seemingly has yet to do -- meaningfully advance infrastructure.

For decades, I believe that the root of the broader U.S. infrastructure problem has been in the lack of good policy decisions, both nationally and strategically. Solid, strategic decision making over time will go a long way toward accomplishing that goal. I have said that the solution for advancing infrastructure in the U.S. could rest with nonpartisan, truly independent commissions at the federal and regional levels with the authority to make all decisions related to national infrastructure. And that is something I haven't seen in any notable way in this country. As a result, the U.S. is severely lagging behind other regions of the world as far as advancing infrastructure. Support for this is in the American Society of Civil Engineers' (ASCE) [report card](#) for 2017, which gave the U.S. a D+ for infrastructure.

Michigan Infrastructure Council

On the surface, creating an infrastructure council, as the State of Michigan did in July 2018 to help put infrastructure projects in motion, may not seem like much. But the state has actually taken a pivotal step in the right direction. Michigan seems to have laid the foundation through bipartisan legislation under [Act 323](#) to approve a bold infrastructure governance plan. The executive body through which the state would act is a newly created Michigan Infrastructure Council. I see many promising structural features, including:

- 1. A broad scope:** It includes water, transportation, energy and telecommunications-related infrastructure.
- 2. A constructive governance structure** placed within the Department of Treasury and not within any individual infrastructure department. Voting members include private- and public-sector experts and representative appointments by the governor, majority and minority ranking legislative leaders.
- 3. The creation of a statewide asset management database** that could give both public and private entities the ability to coordinate the state's infrastructure assets, including below-ground structures such as drainage pipes, gas mains and broadband cables.
- 4. Annual statewide asset management assessment:** The provision could document needs and help determine priorities.

5. Comprehensive planning and implementation: Annual, medium- and long-term asset management plans are included, as well as funding recommendations and coordination and integration across asset classes and regions.

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6. Annual reporting requirement: This tracks progress on established performance goals.

7. Advising and conducting research in finance, technology, operations, delivery and best practices to better align state incentives to infrastructure improvement.

I know of no other examples of U.S. states making such changes to effectuate better infrastructure governance. Interestingly enough, it was the state of Michigan that created a precursor to this infrastructure council with its “transportation asset management council” (TAMC) of [Act 499](#) in 2002 to “provide a coordinated, unified effort by the various roadway agencies within the state.” According to Act 499, the council was charged with advising on a statewide asset management strategy and its implementation in a cost-effective and efficient manner. Historically, in Michigan and other U.S. states, I believe lack of funding has been the main barrier to improving the state’s infrastructure. The reaffirmation of the state’s commitment to infrastructure and governance structure under the treasury department, which controls state tax revenues, may well be positive signs for better funding in the future.

From my perspective, the main reason why the U.S. is stuck in reverse as it pertains to its infrastructure is governance. An infrastructure plan that leaves the current governance structure largely in place may not result in meaningful improvements to infrastructure. If you need evidence of this, there is no need to look further than the aging roads, bridges and rail systems throughout the country.

Results Require Patience

But putting together a body more free of political interference with constructive policy and financial support to address infrastructure needs is one thing. Seeing it through successfully is an entirely different matter. Time will tell if Michigan's new infrastructure council will be a success. It will also require patience and a willingness to work through inevitable mistakes that will occur as the new council finds its footing.

It is also important to remember that meaningful changes to infrastructure tend not to happen in a year or two. Implementing strategies of this magnitude, in my professional opinion, requires a multiyear agenda. My experience working at a major New York City transportation agency for over a decade and spending the last 20 years working with major infrastructure agencies as a rating agency analyst underscores for me that infrastructure investing requires sound planning and resources and, perhaps most importantly, it takes time. Improving infrastructure across a country like the U.S. could take decades.

Patience Leads To Wiser Financial Decisions

This means tabling the desire to make rash changes to the long-term strategy because they are not facilitating change quickly enough. I believe acting on that impulse will only result in more inefficient investments of resources. Instead, a wise investment strategy for infrastructure is to plan for the long term. And to do that successfully, experience tells me you need to create independence, find the money and allow the experts to do their jobs. Even the best long-term financial strategies have their shortcomings. It's the ability to work through them that I find makes them successful.

The [data](#) from the ASCE suggests that, at \$4.6 trillion, the U.S. infrastructure deficit is too large for most states to handle on their own. [According to the U.S. Census Bureau](#), state and local governments as a collective already spend about \$3 trillion annually (as of 2015) in numerous other areas of government services besides infrastructure. In short, we need to solve a large problem and need a new revenue source, and I believe the federal government has to be a major part of the solution. That said, if Michigan's newly created infrastructure council can see its "forest through the trees" vision all the way through, in spite of the pesky branches that will inevitably get in its way, the state's water, transportation,

power and telecommunications infrastructure could receive a real boost. And if it's successful over time, this plan could very well turn out to be the blueprint that the rest of the country follows in meaningfully advancing U.S. infrastructure.

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Managing Director and Head of the Americas in Fitch Ratings' global infrastructure and project finance group.

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How To Turn Ancient Cities Into Smart Ones



Judith Magyar Brand Contributor
SAP BRANDVOICE

Egyptian rulers have always had close relationships with their engineers and city planners. Not only were they building for eternity, but they were adept at accommodating growing populations in the best possible locations in a harsh environment.

“What’s different today is the need for an infrastructure that can accommodate smart city technologies,” says Sherif Youssef, Chief Executive Officer of [Hassan Allam Technologies](#). The company is a subsidiary of Egypt’s [Hassan Allam Holding](#) group which has interests in construction, building materials and utilities.

A family business

Hassan Allam started out as a small, family-run general contractor, but when King Farouk ordered a new hospital to be built on the site of an automobile accident he



Michigan
Transportation Asset
Management Council

FOR IMMEDIATE RELEASE

THURSDAY, OCTOBER 25, 2018

CONTACTS: Joanna I. Johnson, TAMC Chair
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Roger Belknap, TAMC Coordinator
517-335-4580 belknapr@michigan.gov

Michigan Transportation Asset Management Council Receives Special Tribute from Governor Snyder

October 24, 2018 -- The Michigan Transportation Asset Management Council (TAMC) received a special tribute from Governor Rick Snyder at its annual fall conference in Marquette Tuesday. The tribute was presented to members of the TAMC by Therese Empie, Senior Strategy Advisor from the Office of the Governor.

The Governor praised TAMC for its efforts to improve Michigan's infrastructure through the promotion of asset management techniques and performance measurement. Referring to the council's efforts, the text of the tribute recognized TAMC for its best practices "as they support the development of asset management methodologies and provide education and training on the benefits of developing road improvement programs through the use of asset management principles and procedures."

"It's an honor for TAMC to be recognized," said Chairperson Joanna I. Johnson. "We share this with all of the transportation agencies across the state for years of collaboration, data gathering and promoting asset management principles to make data driven decisions."

Johnson, the Managing Director of the Road Commission of Kalamazoo County, represents the County Road Association of Michigan for the TAMC.

Three additional TAMC members were present at the event, including Derek Bradshaw, Director-Coordinator for the Genesee County Metropolitan Planning Commission, representing the Michigan Association of Regions; Robert Slattery, emcee for the event and Director of the Department of Public Works for the City of Burton, representing the Michigan Municipal League; and Brad Wieferich, Director of the Bureau of Development for the Michigan Department of Transportation (MDOT), representing MDOT.

The educational conference included representatives from cities and villages, county road commissions, MDOT and the private sector. Topics discussed included recent condition data for roads and bridges, comparison of geology and soil types with road conditions, capital preventive maintenance techniques, the potential benefits of bundling bridge projects, the results of TAMC's recent culvert pilot project, and a

discussion of recent state legislation creating the Michigan Infrastructure Council and the Water Asset Management Council.

Transportation asset management is a process of managing public assets, such as roads and bridges, based on the long-range condition of the entire transportation system. TAMC, created in 2002 by the Michigan Legislature, promotes the concept that the transportation system is unified, rather than separated by jurisdictional ownership. Its mission is to recommend an asset management strategy to the Michigan Infrastructure Council and provide an annual report to the Michigan Infrastructure Council, the State Transportation Commission, the legislature, and the transportation committees of the house and senate each year.

Chair: Joanna Johnson, CRA; **Vice-Chair:** Bill McEntee, CRA; Bob Slattery, MML; Gary Mekjian, MML;
Jon Start, MTPA; Brad Wieferich, MDOT; Don Disselkoen, MAC;
Derek Bradshaw, MAR; Jennifer Tubbs, MTA; Rob Surber, MCSS

###

View road and bridge conditions, interactive dashboards and learn more about Michigan Transportation Asset Management Council: www.michigan.gov/tamc



STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

NICK A. KHOURI
STATE TREASURER

FOR IMMEDIATE RELEASE

Sept. 28, 2018

***Michigan Infrastructure Council Announces Appointment of
Water Asset Management Council Members***

Water Asset Management Council a 'Critical Piece of Asset Management Plan'

LANSING, Mich. – The Michigan Infrastructure Council recently announced that they have appointed the first members to the Water Asset Management Council.

“The Water Asset Management Council’s work will be a critical piece of our complete infrastructure asset management plan,” said John Weiss, chairman of the Michigan Infrastructure Council. “I thank the individuals who have been appointed for their commitment to take on such an important and urgent topic that will affect all Michiganders.”

Supported by the Michigan Department of Environmental Quality, the nine-member Water Asset Management Council advises the Michigan Infrastructure Council on water-related infrastructure topics. Together, the Water and Transportation asset management councils will advise the Michigan Infrastructure Council on a statewide asset management strategy and develop templates for transportation, drinking water, wastewater, and stormwater asset management planning.

The [Water Asset Management Council](#) members include:

- Scott House, director of public works for the city of East Lansing. He will represent the Michigan Municipal League.
- Cameron Van Wyngarden, superintendent for Plainfield Charter Township. He will represent the Michigan Townships Association.
- Scott Noesen, commissioner on the Midland County Board of Commissioners. He will represent the Michigan Association of Counties.
- Evan Pratt P.E., Washtenaw County Water Resources Commissioner. He will represent the Michigan Association of Drain Commissioners.

- Sue McCormick, chief executive officer of the Great Lakes Water Authority. She will represent a regional drinking water, wastewater, or stormwater authority.
- Carrie Cox, chief engineer in the Oakland County Water Resource Commissioner's Office. She will represent a water infrastructure association.
- Doug LaFave, assistant city manager for the city of East Grand Rapids. He will represent a member with drinking water, wastewater, or storm water asset management experience.
- Jane Fitzpatrick, program manager with the Eastern Michigan Council of Governments. She will represent a region.
- Aaron Keatley, chief deputy director of the Michigan Department of Environmental Quality. He will represent the department.

The Michigan Infrastructure Council appoints members of the Water Asset Management Council. The Michigan State Transportation Commission appoints the Transportation Asset Management Council.

Under [state law](#), the Michigan Infrastructure Council was created within the state Treasury Department to bring together local utility and infrastructure owners, regional representatives, finance and policy experts, and state department leaders to coordinate infrastructure-related goals and develop a long-term strategy for Michigan's infrastructure assets.

The council will construct the statewide asset management database, facilitate the data collection strategy and produce a 30-year infrastructure investment and management strategy for the state of Michigan.

The council consists of nine voting members, with [five who are appointed by the governor and four who are appointed by the leaders of the legislature](#). At the first meeting on Sept. 6, council members elected John Weiss, who serves as the executive director of the Grand Valley Metro Council in West Michigan, as chairperson and Kathleen Lomako, who serves as the executive director of the Southeast Michigan Council of Governments in Southeast Michigan, as vice-chairperson.

Michigan was the first state in the nation to implement a coordinated effort to better manage the state's drinking water, wastewater, stormwater, transportation, and private utilities [under legislation signed by Gov. Rick Snyder](#).

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TAMC Budget Expenditure Report



Michigan
Transportation Asset
Management Council

 Michigan Transportation Asset Management Council		FY17 Budget	FY17 Actual	FY18 Budget	FY18 Year to Date		FY19 Budget	FY19 Year to Date	
(most recent invoice date)		\$	Balance	\$	Spent	Balance	\$	Spent	Balance
I. Data Collection & Regional-Metro Planning Asset Management Program									
Battle Creek Area Transporation Study	4 qtr 18	\$ 20,000.00	\$ 4,555.97	\$ 20,500.00	\$ 20,213.36	\$ 286.64	\$ 20,500.00	\$ -	\$ 20,500.00
Bay County Area Transportation Study	3 qtr 18	\$ 20,000.00	\$ 9,205.58	\$ 21,100.00	\$ 6,724.59	\$ 14,375.41	\$ 21,100.00	\$ -	\$ 21,100.00
Central Upper Peninsula Planning and Development	3 qtr 18	\$ 40,471.00	\$ -	\$ 47,000.00	\$ 24,395.80	\$ 22,604.20	\$ 47,000.00	\$ -	\$ 47,000.00
East Michigan Council of Governments	AUGUST	\$ 95,995.00	\$ 15,902.25	\$ 111,000.00	\$ 73,040.27	\$ 37,959.73	\$ 111,000.00	\$ -	\$ 111,000.00
Eastern Upper Peninsula Regional Planning & Devel.	3 qtr 18	\$ 20,000.00	\$ -	\$ 23,100.00	\$ 11,595.23	\$ 11,504.77	\$ 23,100.00	\$ -	\$ 23,100.00
Genesee Lapeer Shiawassee Region V Planning Com.	JULY	\$ 39,423.00	\$ 2,250.94	\$ 46,000.00	\$ 29,609.18	\$ 16,390.82	\$ 46,000.00	\$ -	\$ 46,000.00
Grand Valley Metropolitan Council	4 qtr 18	\$ 20,000.00	\$ 1,025.36	\$ 25,000.00	\$ 12,060.69	\$ 12,939.31	\$ 25,000.00	\$ -	\$ 25,000.00
Kalamazoo Area Transportation Study	AUGUST	\$ 20,000.00	\$ 871.89	\$ 22,000.00	\$ 15,451.33	\$ 6,548.67	\$ 22,000.00	\$ -	\$ 22,000.00
Macatawa Area Coordinating Council	3 qtr 18	\$ 20,000.00	\$ 12,594.34	\$ 20,200.00	\$ 4,523.35	\$ 15,676.65	\$ 20,200.00	\$ -	\$ 20,200.00
Midland Area Transportation Study	3 qtr 18	\$ 20,000.00	\$ 2,339.46	\$ 21,000.00	\$ 3,981.92	\$ 17,018.08	\$ 21,000.00	\$ -	\$ 21,000.00
Northeast Michigan Council of Governments	AUGUST	\$ 43,426.45	\$ -	\$ 46,000.00	\$ 46,000.00	\$ -	\$ 46,000.00	\$ -	\$ 46,000.00
Networks Northwest	AUGUST	\$ 61,316.00	\$ -	\$ 72,000.00	\$ 59,603.64	\$ 12,396.36	\$ 72,000.00	\$ -	\$ 72,000.00
Region 2 Planning Commission	3 qtr 18	\$ 37,940.00	\$ 13,196.44	\$ 42,000.00	\$ 18,368.33	\$ 23,631.67	\$ 42,000.00	\$ -	\$ 42,000.00
Saginaw County Metropolitan Plannning Commission	3 qtr 18	\$ 20,000.00	\$ 8,414.71	\$ 22,200.00	\$ 17,495.94	\$ 4,704.06	\$ 22,200.00	\$ -	\$ 22,200.00
Southcentral Michigan Planning Commission	JULY	\$ 53,162.00	\$ 16,246.33	\$ 57,300.00	\$ 26,240.09	\$ 31,059.91	\$ 57,300.00	\$ -	\$ 57,300.00
Southeast Michigan Council of Governments	SEPT	\$ 135,680.00	\$ 0.40	\$ 174,000.00	\$ 174,000.00	\$ -	\$ 174,000.00	\$ -	\$ 174,000.00
Southwest Michigan Planning Commission	4 qtr 18	\$ 37,030.00	\$ -	\$ 41,000.00	\$ 41,000.00	\$ -	\$ 41,000.00	\$ -	\$ 41,000.00
Tri-County Regional Planning Commission	3 qtr 18	\$ 33,786.00	\$ -	\$ 40,000.00	\$ 7,633.36	\$ 32,366.64	\$ 40,000.00	\$ -	\$ 40,000.00
West Michigan Regional Planning Commission	SEPT	\$ 82,467.00	\$ -	\$ 91,000.00	\$ 55,428.20	\$ 35,571.80	\$ 91,000.00	\$ -	\$ 91,000.00
West Michigan Shoreline Regional Development Com.	SEPT	\$ 46,781.56	\$ 636.55	\$ 54,000.00	\$ 51,333.45	\$ 2,666.55	\$ 54,000.00	\$ -	\$ 54,000.00
Western Upper Peninsula Regional Planning & Devel.	3 qtr 18	\$ 34,867.00	\$ 19.47	\$ 40,000.00	\$ 18,657.04	\$ 21,342.96	\$ 40,000.00	\$ -	\$ 40,000.00
MDOT Region Participation & PASER Quality Control	10/14/18	\$ 62,750.00	\$ (22,587.50)	\$ 80,000.00	\$ 52,914.97	\$ 27,085.03	\$ 91,440.00	\$ -	\$ 91,440.00
Fed. Aid Data Collection & RPO/MPO Program Total		\$ 965,095.01	\$ 64,672.19	\$ 1,116,400.00	\$ 770,270.74	\$ 346,129.26	\$ 1,116,400.00	\$ -	\$ 1,116,400.00
PASER PNFA Data Collection Total		\$ 40,760.39	\$ -	(FY18 PNFA Moved Into Data Collection Program Above)			(FY19 PNFA Moved Into Data Collection Program Above)		
III. TAMC Central Data Agency (MCSS)									
Project Mgmt	9/14/18	\$ 37,800.00	\$ (2,264.00)	\$ 42,000.00	\$ 46,585.00	\$ (4,585.00)	\$ 42,000.00	\$ -	\$ 42,000.00
Data Support /Hardware/Software	9/14/18	\$ 60,200.00	\$ 1,367.00	\$ 68,800.00	\$ 67,800.00	\$ 1,000.00	\$ 68,000.00	\$ -	\$ 68,000.00
Application Development / Maintenance / Testing	9/14/18	\$ 83,280.00	\$ 5,042.00	\$ 114,475.00	\$ 115,250.00	\$ (775.00)	\$ 114,000.00	\$ -	\$ 114,000.00
Help Desk / Misc Support	9/14/18	\$ 66,600.00	\$ 948.00	\$ 70,200.00	\$ 68,200.00	\$ 2,000.00	\$ 70,000.00	\$ -	\$ 70,000.00
Training	9/14/18	\$ 27,600.00	\$ (1,533.00)	\$ 34,950.00	\$ 24,850.00	\$ 10,100.00	\$ 34,960.00	\$ -	\$ 34,960.00
Data Access / Reporting	9/14/18	\$ 47,155.00	\$ 1,459.00	\$ 49,575.00	\$ 52,175.00	\$ (2,600.00)	\$ 49,600.00	\$ -	\$ 49,600.00
FY17 Off Budget: IRT Re-write - \$241,000		\$ 241,040.00	\$ (18,983.00)						
TAMC Central Data Agency (MCSS) Total		\$ 322,635.00	\$ 5,019.00	\$ 380,000.00	\$ 374,860.00	\$ 5,140.00	\$ 378,560.00	\$ -	\$ 378,560.00
IV. TAMC Training & Education (MTU) Calendar Year Z1									
V. TAMC Activities (MTU) Z15/R1		\$ 210,000.00	\$ 1,341.10	\$ 235,000.00	\$ 130,534.19	\$ 104,465.81	\$ 220,000.00	\$ -	\$ 220,000.00
VI. TAMC Expenses		\$ 70,000.00	\$ 9,746.50	\$ 265,000.00	\$ 217,019.13	\$ 47,980.87	\$ 120,000.00	\$ -	\$ 120,000.00
Fall Conference Expenses	12/8/17	\$ 6,000.00		\$ 10,000.00	\$ 7,269.00		\$ 10,000.00	\$ -	
Fall Conf. Attendance Fees + sponsorship Fees	12/8/17	\$ -		\$ -	\$ 4,405.00		\$ -	\$ -	
Net Fall Conference	12/8/17	\$ 8,625.00	\$ 312.60	\$ 14,405.00	\$ 7,269.00	\$ 7,136.00	\$ 10,000.00	\$ -	\$ 10,000.00
Spring Conference Expenses	8/17/18	\$ 8,000.00	\$ -	\$ 10,000.00	\$ 7,439.36		\$ 10,000.00	\$ -	
Spring Conf. Attendance Fees + sponsorship Fees	8/17/18	\$ -	\$ -	\$ -	\$ 8,350.00		\$ -	\$ -	
Net Spring Conference	8/17/18	\$ 14,140.00	\$ 7,418.20	\$ 18,350.00	\$ 7,439.36	\$ 10,910.64	\$ 10,000.00	\$ -	\$ 10,000.00
Other Council Expenses	9/28/18	\$ 3,915.29	\$ (4,567.95)	\$ 10,000.00	\$ 7,301.72	\$ 2,698.28	\$ 10,000.00	\$ -	\$ 10,000.00
TAMC Expenses Total		\$ 26,680.29	\$ 3,162.85	\$ 42,755.00	\$ 22,010.08	\$ 20,744.92	\$ 30,000.00	\$ -	\$ 30,000.00
VII. Culvert Pilot Project									
Central Data Agency (MCSS)	10/16/18	\$ -	\$ -	\$ 15,000.00	\$ 9,312.00	\$ 5,688.00	\$ -	\$ -	\$ -
TAMC Administration & Contingency	6/29/18	\$ -	\$ -	\$ 106,538.00	\$ -	\$ 106,538.00	\$ -	\$ -	\$ -
Central Upper Peninsula Planning and Development	3 qtr 18	\$ -	\$ -	\$ 88,641.00	\$ 25,726.56	\$ 62,914.44	\$ -	\$ -	\$ -
East Michigan Council of Governments	AUGUST	\$ -	\$ -	\$ 328,607.00	\$ 121,459.40	\$ 207,147.60	\$ -	\$ -	\$ -
Eastern Upper Peninsula Regional Planning & Devel.	3 qtr 18	\$ -	\$ -	\$ 5,688.00	\$ 653.30	\$ 5,034.70	\$ -	\$ -	\$ -
Genesee Lapeer Shiawassee Region V Planning Com.	JULY	\$ -	\$ -	\$ 124,909.00	\$ -	\$ 124,909.00	\$ -	\$ -	\$ -
Grand Valley Metropolitan Council	4 qtr 18	\$ -	\$ -	\$ 77,782.00	\$ 69,733.25	\$ 8,048.75	\$ -	\$ -	\$ -
Kalamazoo Area Transportation Study	AUGUST	\$ -	\$ -	\$ 50,402.00	\$ 14,970.42	\$ 35,431.58	\$ -	\$ -	\$ -
Northeast Michigan Council of Governments	AUGUST	\$ -	\$ -	\$ 33,506.00	\$ 21,781.96	\$ 11,724.04	\$ -	\$ -	\$ -
Networks Northwest	AUGUST	\$ -	\$ -	\$ 184,513.00	\$ 163,641.05	\$ 20,871.95	\$ -	\$ -	\$ -
Region 2 Planning Commission	3 qtr 18	\$ -	\$ -	\$ 54,900.00	\$ 2,328.00	\$ 52,572.00	\$ -	\$ -	\$ -
Southcentral Michigan Planning Commission	JULY	\$ -	\$ -	\$ 93,456.00	\$ 894.62	\$ 92,561.38	\$ -	\$ -	\$ -
Southeast Michigan Council of Governments	SEPT	\$ -	\$ -	\$ 87,644.00	\$ 45,757.96	\$ 41,886.04	\$ -	\$ -	\$ -
Southwest Michigan Planning Commission	4 qtr 18	\$ -	\$ -	\$ 101,849.00	\$ 67,138.17	\$ 34,710.83	\$ -	\$ -	\$ -
Tri-County Regional Planning Commission	3 qtr 18	\$ -	\$ -	\$ 47,587.00	\$ -	\$ 47,587.00	\$ -	\$ -	\$ -
West Michigan Regional Planning Commission	SEPT	\$ -	\$ -	\$ 241,511.00	\$ 181,441.39	\$ 60,069.61	\$ -	\$ -	\$ -
West Michigan Shoreline Regional Development Com.	SEPT	\$ -	\$ -	\$ 144,238.00	\$ -	\$ 144,238.00	\$ -	\$ -	\$ -
Western Upper Peninsula Regional Planning & Devel.	3 qtr 18	\$ -	\$ -	\$ 63,229.00	\$ 45,050.72	\$ 18,178.28	\$ -	\$ -	\$ -
Culvert Pilot Project Total		\$ -	\$ -	\$ 1,850,000.00	\$ 769,888.80	\$ 1,080,111.20	\$ -	\$ -	\$ -
Total Program		\$ 1,635,170.69	\$ 83,941.64	\$ 3,889,155.00	\$ 2,284,582.94	\$ 1,604,572.06	\$ 1,864,960.00	\$ -	\$ 1,864,960.00
Appropriation		\$ 1,626,400.00		\$ 3,876,400.00		41.26%	\$ 1,876,400.00		100.00%



MEMORANDUM

Date: November 2, 2018
To: Transportation Asset Management Council – TAMC ACE Committee
From: Roger Belknap, TAMC Coordinator, MDOT Asset Management & Policy Division Staff

RE: Request for FY2018 Budget & Contract Modifications

I have two requests for fiscal year 2018 budget modifications as we are in the midst of year-end operations:

First, the Michigan Technological University's (MTU) TAMC Activities Contract was increased \$150,000 in the spring due to the TAMC Culvert Pilot project. At the time this increase was made, the TAMC Bridge Committee was working with MTU to establish a program budget. As a refresher, the budget for the Culvert Pilot was based upon assumptions made back in the spring, rather than actual knowledge of the level of effort to complete the project.

At this time, MTU has informed us that an additional \$22,100 will be needed to cover all the expenses they incurred with the project. As such, staff recommends this budget action to fully cover the expenses MTU's staff incurred with the project. We believe this project was a success and would not have been possible without MTU's consultation and management. Staff was informed by MDOT Finance that the entire \$2 million allocation for the Culvert Pilot program has been secured, therefore this increase in the MTU Activities contract will not affect other TAMC program funds.

Second, the Northeast Michigan Council of Governments has expended their entire FY2018 Asset Management program allocation of \$46,000 as of August 2018. They estimate another \$6,200 would be needed to cover September 2018 expenses. Over the past 4 fiscal years, NEMCOG has expended their entire allocation every year. In FY2015, the budget allocation for NEMCOG was \$37,916; in FY2017 the allocation was increased to \$43,426 cover additional Non-Federal Aid data collection and in FY2018 the allocation was increased to \$46,000 to accommodate additional work items in the asset management Unified Work Program, per TAMC's directive.

In review of the invoices and program reports, the reason for the cost overrun is the data collection budget appears inadequate to cover the coordination of a region of this size; additionally, local agencies are relying on the region for added technical support for the IRT and general asset management assistance. Funding for this allocation increase would come from unspent FY2018 TAMC budget line items. Staff recommends making this modification to cover all FY2018 program expenses incurred by the region.

Work Product		Tasks	TAMC	Staff	CS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	MIC	WAMC	2018	2019	Status	Notes
PA 325																				
	Training	<i>Revise Training Programs</i>			X	X						X								
		<i>Revise budget for new training needs</i>			X	X						X		?						
	Modeling	<i>Develop an understanding of asset deterioration</i>			X		X													
		<i>Make deterioration rates available to the public</i>			X	X	X					X								
	AM Plans	<i>Update/Create Asset Management Plan Template</i>			X							X								
		<i>Develop a 3-year schedule for plan submission by top 123</i>					X													
	Coordinate with WAMC/MIC	<i>Coordinate asset condition approach with WAMC/MIC</i>										X		X	X					
		<i>Define age of construction across assets</i>										X		X	X					
		<i>Coordinate on transparency and what needs to be shared</i>					X					X	X	X	X					
	Data Collection	<i>Data Governance and standards for culverts</i>					X					X		X	X					
		<i>Data Governance and standards for signals</i>					X					X		X						
		<i>Leverage technology for data collection</i>					X			X		X			X					
	Staff	<i>Identify staff and budget needed to comply</i>	X	X	X	X				X		X								

Work Product		Tasks	TAMC Staff	CS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	MIC	WAMC	2018	2019	Status	Notes
Communications																			
1	Press Releases	Continue publishing press releases as appropriate	X			X						X					Ongoing		Past Press Releases are on the website
2	Monthly Summary of TAMC Activities & Initiatives	Seek feedback on larger issues	X									X	X				Ongoing		As necessary on appropriate agenda items
3	Outreach with Stakeholders	Regional Coordinator Call	X	X	X				X			X					Ongoing	Calls ongoing since April	
		Query how is info shared with partner agencies	X			X						X							
4	Support TAMC Partner Agencies at Conferences	Develop schedule of conferences/topics	X			X						X				✓			
		Coordinate TAMC attendees	X									X				✓			
Publications																			
1	ANNUAL REPORT *	Compile and submit to Legislature by May														✓			
		Develop detailed schedule with milestones	X													✓			
		Get feedback from conference attendees	X			X										✓		Customer Satisfaction Survey gave value of Annual Report adequate marks (3.7/5)	Should we make this a standard question at conferences?
		Marketing assessment	X			X	X			X		X							ACE gave this medium priority
2	Website Update	Maintain website	X	X		X	X										ongoing	MDOT staff being trained	
		Define Support Role	X	X															
3	"Bridge" Newsletter	Develop schedule w/ milestones & who is writing	X			X											ongoing	MTU completed September article on Culvert pilot project	Next article to be about PA 325 requirements
4	Other Publications	Investigate other opportunities to highlight TAMC	X			X	X	X		X							ongoing		When TAMC has something newsworthy to share, staff will develop material to include in members' constituent newsletters
Public Outreach																			
1	Promote Roadsoft as AM Platform	Continue to assist MTU-CTT in deployment of Roadsoft	X	X	X		X			X							ongoing		

Work Product		Tasks	TAMC	Staff	CSS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	M/C	WAMC	2018	2019	Status	Notes
2	Website Interactive Maps	Overall coordination/updates	X	X														ongoing		
		Update cycle related to TAMC activity	X	X			X	X										ongoing		
		Continual improvement	X	X	X	X	X	X		X								ongoing		
3	Dashboards	Overall coordination/updates	X	X			X	X		X								ongoing		
		Continual review of new/revised dashboards	X	X			X	X									✓		<i>Upgrades made in 2018</i>	
		Timely updates scheduled, define & implement	X	X			X	X		X									<i>CSS working on Dashboard update to reflect 2018 annual report data</i>	
4	Mobile Apps	Maintain mobile apps		X														ongoing		interactive map is now tablet and phone friendly
		Update as needed	X	X			X											ongoing	dashboard mobile app still to come	
		Lessons learned	X	X		X	X													Who would best evaluate this?
5	TAMC Awards	Continue program	X			X						X					✓			ACE gave this high priority
		Evaluate & update selection process	X			X						X								ACE gave this lower priority to be addressed later in 2018
6	Social Media	Explore social media platforms	X			X						X								ACE gave this medium priority

Work Product	Tasks	TAMC Staff	CS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	MIC	WAMC	2018	2019	Status	Notes
Awareness of Asset Management																		
1	21st CIC	Monitor progress - tasks TBD	X						X	X					✓		Should the press release for the Pilot Project Award be included on TAMC website?	Dave W & Joanna are involved in database pilot project
		Track activities	X						X	X					✓			
		Data governance & sharing	X						X	X								
		Utility coordination																
		Culvert Pilot Project	X							X	X					✓	Report transmitted to Governor's office in September	
Data Collection																		
1	COLLECT PASER DATA *	Collect data on no less than 1/2 FA paved	X	X	X	X	X		X	X	X					ongoing	2018 data collection begins in April	
		Perform QC on PASER ratings	X		X					X						ongoing	Consultant hired by MDOT to do this; will speak to Data Committee in March	
		Continue use of IRT to upload data sets	X	X	X				X	X	X					ongoing		Updates provided monthly
2	Review Collection Methods & Reimbursement Policy for FA and Non-FA Networks (Paved & Unpaved)	Research cost-effectiveness of data collection effort	X		X	X	X		X	X	X	X				ongoing	On hold until better data available based on new data collection policy, per Data Committee	Data Committee assigned this high priority, but would like better costs per mile first
		Focus efforts to collect data on top 124	X		X	X	X			X		X					PA 325 increases focus on this	Data Committee assigned this lower priority
	Bridges	Anticipate changes - new nat'l requirements	X				X		X						✓			
4	Ensure Framework Base Map is Current	Update data sets within Framework	X	X				X	X	X						ongoing		framework base map & Act 51 maps not the same; to be corrected as identified
		Develop business needs for RFPs		X	X					X								ACE to discuss as part of budget discussion

Work Product		Tasks	TAMC	Staff	CSs	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	MC	WAMC	2018	2019	Status	Notes
		Subject matter expert input & feedback	X	X						X	X	X						ongoing		Raters provide feedback on corrections as they find them
5	Data Collection Models	Continue Roadsoft promotion to Act 51 agencies	X		X					X								ongoing		
		Maintain Markov model in working order			X					X								ongoing	Data Committee has begun to discuss data analysis options	
7	Asset Management Plans	Prep & training for development of agency AM plans	X		X	X	X			X	X	X	X						MTU tested Pavement AM Plan Pilot Project in December 2017	
		Focus efforts to collect plans from top 124	X		X	X	X			X	X	X	X						PA 325 helps address this	

Work Product		Tasks	TAMC	Staff	CSS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	MC	WAMC	2018	2019	Status	Notes
Training & Education																				
1	PASER & IRT TRAINING *	Continue training	X	X	X		X		X	X	X						✓		CSS and MTU working to schedule/coordinate training dates for 2019	
		Identify attendees & report results	X	X	X															
		Identify success/failure & report results	X	X	X		X										ongoing		Customer Satisfaction Survey gave training high marks(4.38/5); participation could be better as only just more than half of respondents had attended training	
2	Local Officials Training & Workshops	Training gap analysis	X		X	X		X												
		Informational tools	X		X	X		X												
		Update as necessary	X		X	X		X									ongoing			
3	New AM Training	Operational aspects of AM	X		X	X	X	X									✓		Could be addressed as part of updated training for PA 325	
		Update as necessary	X		X	X	X	X									ongoing			
4	Inventory-based Rating Training	Develop and deliver training program	X		X	X	X										✓			
	Informational Tools	Pilot two 90-second videos	X			X								X						ACE assigned this low priority
6	Continued Education w/ Legislature	Customized pamphlet/brochure by lege district	X			X						X							MPOS and regions do an annual report of paser condition	
		Set up event w/ legislators	X			X						X							Referred to ACE; would need to seek assistance/support from MITA	ACE gave this high priority
7	Bi-Annual Conference	Continue coordinating conference(s)	X		X	X						X					ongoing		Next conference October 23 in Marquette	
		Identify attendees & report results	X		X	X						X					ongoing			

Work Product		Tasks	TAMC Staff	CSS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	MIC	WAMC	2018	2019	Status	Notes
		Identify success/failure & report results	X		X	X					X						ongoing		
Data Analysis & Research Opportunities																			
1	IRT DATA *	Integration between PASER & IRT	X	X	X				X								ongoing		
		Data quality	X	X			X		X								ongoing		
		Analyze Best & Worst practices	X				X	X				X							Data committee discussed in September; more conversation likely needed
2	Data Storage & Design Reports - Recommendations for Optimal Use	Assessment	X	X	X				X									2018 rewrite of IRT with enhanced reporting should address this	
		Update requirements working w/ stakeholders	X	X			X		X										
		Report	X				X	X				X							CSS working on an update
3	Forecasting	Review new IRT data for forecasting tools	X	X	X		X				X							In process	Data Committee assigned this medium priority
Project & Investment Reporting																			
	Fields Inquiring about AM Process	Compare & analyze AM plans & data from IRT with PASER and Bridge data	X	X		X	X	X			X							Data committee discussing potential research problem statement	Data Committee assigned this high priority
		Analyze plan elements & components; present agencies that are high performers	X	X		X	X											after data committee completes analysis	
		Communication plan	X	X		X			X									included in MPOs and RPO's 2018 UWP	
3	Continuing Compliance Monitoring	Analysis & reporting	X	X			X		X								ongoing	support staff working with MDOT Act 51 team; monthly status updates reported at Data	
		Continue monitoring on how compliance is being done	X				X		X								ongoing		
4	Quality Control (IRT)	Assess & report on quality of information	X	X	X	X	X				X								ad hoc approach right now
		Update 2009 Cost Investment Report	X	X	X		X			X	X								still to come
Performance Measures																			

Work Product		Tasks	TAMC Staff	CS	MTU	ACE	Data	Bridge	MPO/RPO	MDOT	Act 51	TAMC	Chair	M/C	WAMC	2018	2019	Status	Notes
1	Develop Measures for TAMC	Implementation of Work Program	X	X	X	X	X	X				X				ongoing		summary provided monthly	
		IRT-ADARS	X							X								summary provided monthly	
		Miles collected	X															summary provided monthly	
		Number of Asset Management Plans rec'd	X															Data committee to consider monthly	
		Council budget spent/budget reporting	X			X						X						summary provided monthly	
		Develop more as needed	X			X	X	X				X						Culvert Project measures of success?	
		Determine where there's duplication of effort	X			X	X	X				X					ongoing		
	* denotes items required by law																		

2018

Michigan Local Agency Culvert Inventory Pilot Evaluation Report



Photo provided by the Center for Technology and Training

The Michigan Transportation Asset Management Council (TAMC), the TAMC Bridge Committee and the Center for Technology and Training at Michigan Technological University (CTT) wish to acknowledge the contribution of the transportation professionals who coordinated the culvert data collection at their respective agencies, and for the data, input and suggested best practices for the collection of culvert data for Michigan's local transportation agencies. Their input assisted in the development of this report.

TAMC Bridge Committee Members:

Rebecca Curtis, Michigan Department of Transportation (MDOT)
 Donald Disselkoen, Ottawa County
 Al Halbeisen, OHM Advisors
 Brad Wieferich, MDOT
 Gary Mekjian, City of Farmington Hills
 Keith Cooper, MDOT
 William McEntee, Road Commission for Oakland County
 Wayne Harrall, Kent County Road Commission
 Joanna Johnson, Road Commission of Kalamazoo County
 Brian Vilmont, Prein and Newhof, Inc.

Scott Bershing, Technical Writer

Center for Technology and Training

Tim Colling, Ph.D., P.E., Director

Center for Technology and Training

Chris Gilbertson, Ph.D., P.E., Associate Director

Center for Technology and Training



Michigan
Transportation Asset
Management Council



Michigan Technological University

Civil and Environmental
Engineering

A full detailed report can be found on the
TAMC website at www.michigan.gov/tamc

PURPOSE OF LOCAL AGENCY CULVERT INVENTORY PILOT

In 2018, the Transportation Asset Management Council (TAMC) Bridge Committee was tasked with managing a work plan for a pilot project for the inspection and inventory of culverts on the local road system. The project was related to a recommendation made by the 21st Century Infrastructure Commission and was informed by the pilot inspection and inventory of culverts done by MDOT in 2016 on the state trunkline highway system. The goal of the 21st Century Infrastructure Commission report is to have Michigan's road and rail systems designed to ensure that rivers, streams, and drains remain free-flowing to protect ecosystem health, as well as investments in transportation infrastructure.

ASSET MANAGEMENT

WHAT is asset management?

At the most basic level, asset management is a way to meet the goals of good ownership, effective management, and responsible stewardship. In the state of Michigan, asset management has traditionally been applied to maintaining pavements. However, a typical transportation network also comprises bridges, signs, culverts, guardrail, etc. The principles of asset management should be applied to the management of all these components of the asset. Asset management represents more than simply an integration of existing management systems and data. It builds on existing processes and tools to form a continuous improvement guide that complements and supplements existing practice.

WHY use asset management?

It is widely accepted that transportation infrastructure is vital to the economic well-being of our state. For most local authorities, their road network is the most valuable community asset under their control. Despite this, there is a growing realization that the management of these vital and valuable assets is not receiving the attention or funding required for the provision of the optimal state of repair and operation. Developing an asset management plan empowers public agencies to invest their scarce transportation funding in ways that will provide the greatest return. An asset management plan also allows a community to determine what an acceptable level of services is while informing residents and elected officials of the impacts declining transportation funding will have on the system.

HOW does a culvert pilot fit into asset management?

Michigan roads have hundreds of thousands of bridges, culverts, and other drainage infrastructure components, many of which are decades old and on the verge of failure. State agencies have identified at least 65,000 points throughout the state where Michigan's road and rail systems intersect with surface water systems. Many of these points may be undersized for current and future watershed conditions, increasing the potential for flooding. When flooding occurs or structures fail, there are safety, environmental, economic, and social impacts.

WHO participated in this program?

TAMC reached out to the Center for Technology and Training (CTT) at Michigan Technological University and the Center for Shared Solutions (CSS) and Michigan's regional and metropolitan planning agencies to assist with managing and facilitating the project. The CTT and the TAMC have a long-standing working relationship that, combined with the working structure that the TAMC has already established with local transportation agencies through previous projects, allowed the CTT and the TAMC to quickly initiate, launch, and complete the culvert data collection pilot project within the required timeline. The CSS was involved in the Michigan Infrastructure Asset Management Pilot and was prepared to receive and store the collected data to support a statewide integrated system.

In addition to these partners, 49 local transportation agencies (32 counties, 12 cities and five villages) collected and submitted data through the pilot.

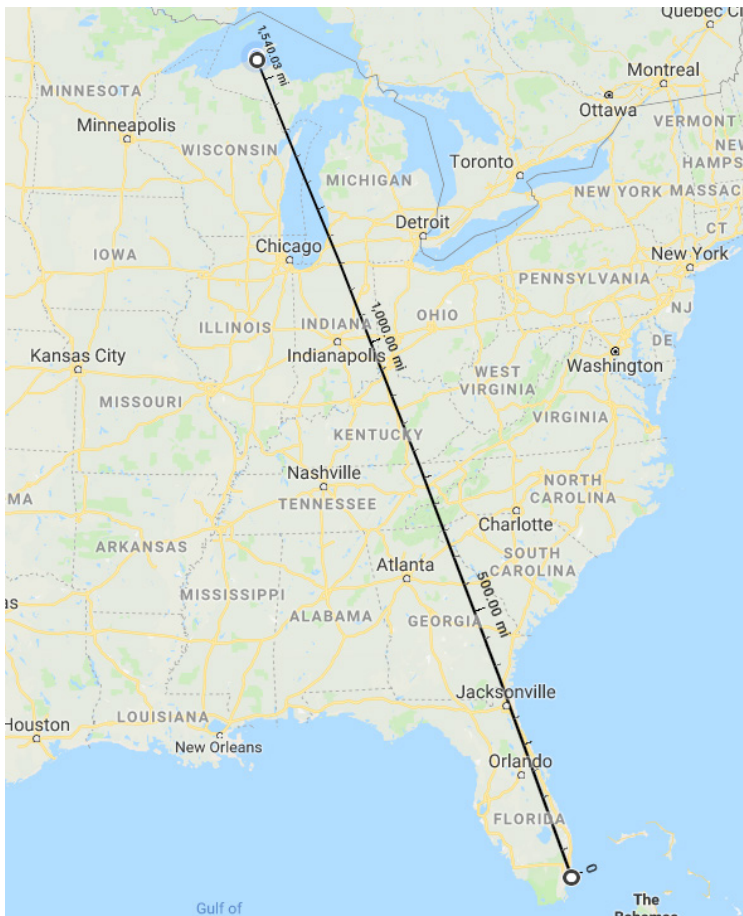
GOALS

The intent of the culvert data collection pilot was to collect data on Public Act 51-certified roads in Michigan at a statewide level for the following goals:

- 1) Estimate the total number of culverts on the local system of Public Act 51-certified public roads.
- 2) Estimate the overall condition of culverts in the state using similar inspection components and rating.
- 3) Determine the range of physical characteristics (inventory information) of culverts, such as material, size and depth, that may impact the cost to maintain or replace the asset.
- 4) Benchmark estimates of agency labor (time and materials) necessary to find and collect inventory data for culverts on a dollar per mile or other production rate basis.
- 5) Benchmark estimates of agency labor (time and materials) necessary to find and collect condition data for culverts on a dollar per mile or other production rate basis.

ESTIMATED STATEWIDE LOCAL AGENCY INVENTORY

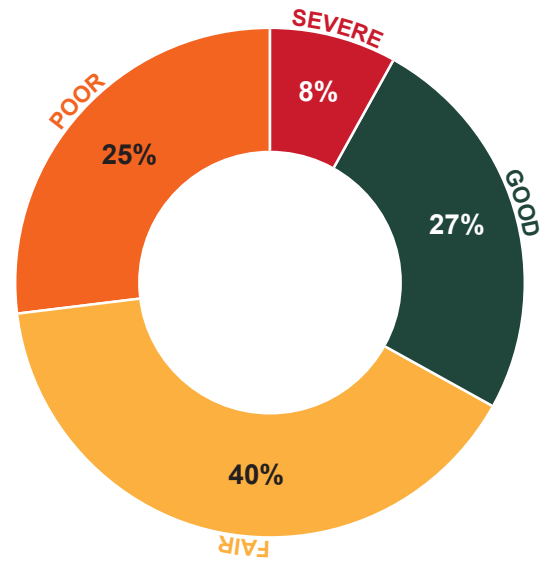
- ▶ Estimated number of local agency culverts: 196,000
- ▶ 27 percent of the culverts are in good condition
- ▶ 69 percent of the culverts are corrugated steel pipe
- ▶ Estimated time to inventory a culvert: 17 minutes
- ▶ Estimated time to inventory and inspect a culvert: 25 minutes
- ▶ Estimated length of local agency culverts: 7.3 million to 9.2 million feet (1,389 to 1,756 miles) of culvert. This is enough culvert pipe to build a single straight culvert from Houghton, Michigan, to the tip of Key West, Florida. (see map below)
- ▶ Estimated replacement cost of local agency culverts: \$1.48 billion



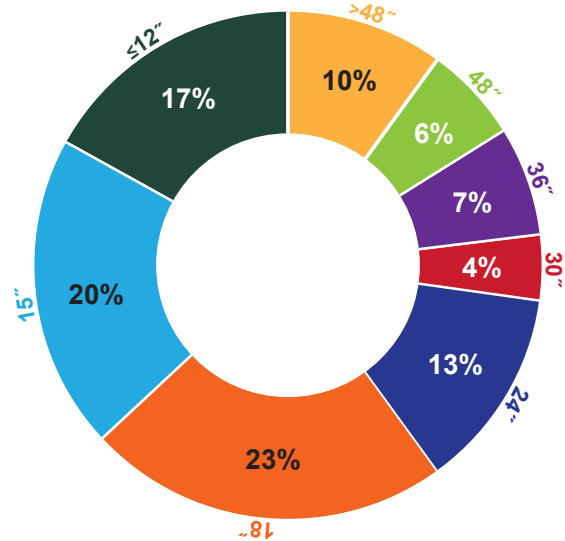
CULVERT COLLECTION BY THE NUMBERS

- ▶ Data collection training using Roadsoft: 78 participants
- ▶ Condition evaluation training: 83 participants
- ▶ Data submittal training: 65 participants
- ▶ Typical collection team size: 2 people
- ▶ Number of culverts inventoried in this pilot: 49,664

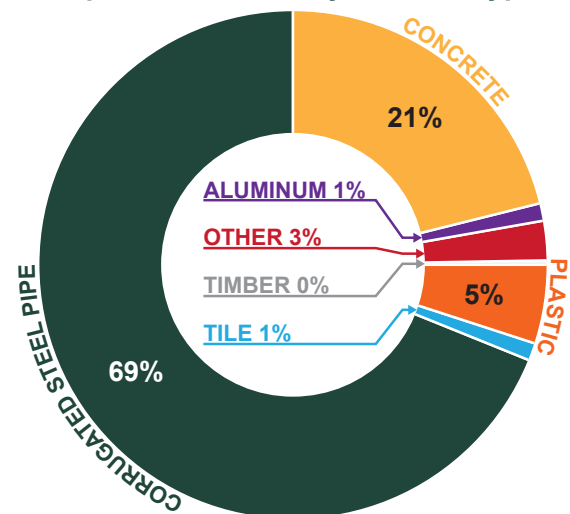
Estimated Local Agency Culvert Condition



Reported Culverts by Span or Diameter (in inches)



Reported Culverts by Material Type



KEY FINDINGS

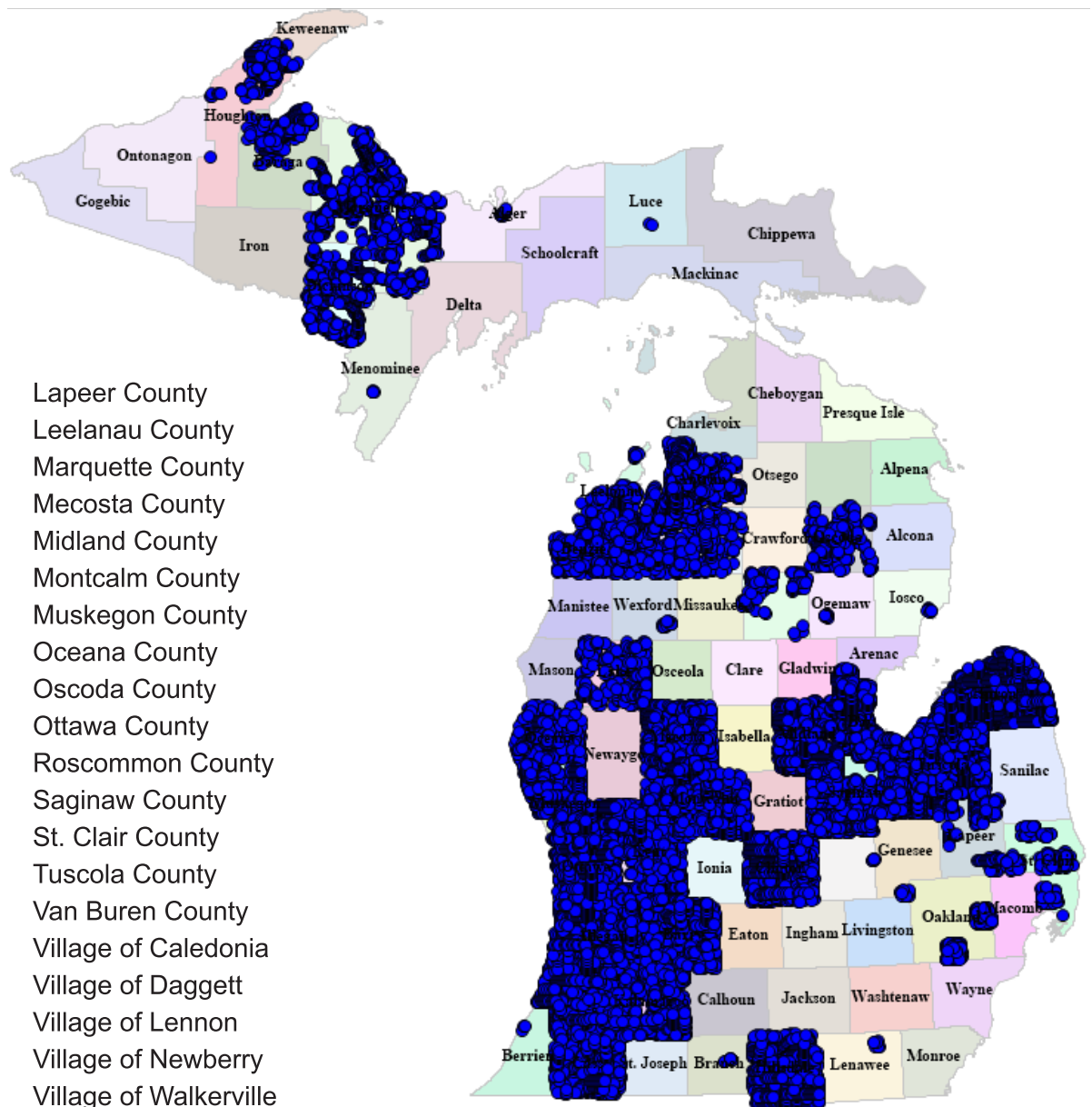
- The tools, training, business processes, and relationship building that the TAMC initiated for the collection of Pavement Surface Evaluation and Rating (PASER) road condition data has created a strong framework for the rapid collection of other asset data on the local agency road system.
- The repeating five-year costs associated with training and data collection for a culvert inventory and condition evaluation program are estimated at \$10.5 million to \$11.25 million (\$2.1 million to \$2.5 million annually). These estimates do not include costs associated with development and implementation of asset management programs for culverts.
- A post-pilot survey showed participant interest in continuing to collect inventory and condition evaluation data on their culverts beyond the pilot timeframe.
- Inventory data from culverts revealed that the majority (approximately 73 percent) of local agency-owned culverts are small (24 inches in diameter or less), made from corrugated steel, and are circular culverts that are located less than 6 feet from the surface. Larger and more deeply buried culverts are of specific interest because they present a larger consequence of failure in terms of risk to the public and expenditure of funds for repair.
- Condition data indicates that local agency-owned culverts are in serviceable shape, with 27 percent of the rated culverts holding condition ratings of 8 or better, and 67.2 percent of the rated culverts holding conditions ratings of 6 or better.
- It is estimated that it will take approximately \$10 million and more than 131,000 collection team hours to complete the initial data collection of local agency culverts.

PARTICIPATING AGENCIES AND LOCATIONS OF INVENTORIED CULVERTS

Local Road Agencies:

Allegan County
 Antrim County
 Baraga County
 Barry County
 Bay County
 Benzie County
 Cass County
 City of Benton Harbor
 City of Big Rapids
 City of Cadillac
 City of Coldwater
 City of East Tawas
 City of Farmington Hills
 City of Fenton
 City of Munising
 City of Muskegon Heights
 City of Rochester Hills
 City of Tecumseh
 City of West Branch
 Clinton County
 Dickinson County
 Grand Traverse County
 Hillsdale County
 Houghton County
 Huron County
 Kalamazoo County
 Kalkaska County
 Kent County
 Lake County

Lapeer County
 Leelanau County
 Marquette County
 Mecosta County
 Midland County
 Montcalm County
 Muskegon County
 Oceana County
 Oscoda County
 Ottawa County
 Roscommon County
 Saginaw County
 St. Clair County
 Tuscola County
 Van Buren County
 Village of Caledonia
 Village of Daggett
 Village of Lennon
 Village of Newberry
 Village of Walkerville



Reporting Period: August 1 - 31, 2018

Monthly Project Progress Report

TAMC Training 2018

September 17, 2018

Project Manager: Roger Belknap

MDOT Contract 2018-0067 Authorization Z1

Contract Dates: 01/01/2017 – 12/31/2017

Contract Amount: \$234,534



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Reporting Period: August 1 - 31, 2018

Task	% of Budgeted Dollars Spent	Notes
Assist Coordinating the MI Transportation Asset Management Conferences	59%	
Conduct MI Transportation Asset Management Workshops	0%	
Conduct Introduction to Transportation Asset Management for Local Officials Training	40%	Completed two training sessions.
Conduct TAMC PASER Training	92%	Task Completed - 10 on-site PASER trainings and four webinars .
Conduct Inventory Based Rating Training	39%	Task Completed -four IBR training webinars.
Create IBR Booklet	11%	
Conduct Michigan Bridge Asset Management Workshop	41%	Completed two on-site workshops and one each Part 1 & Part 2 webinars.
Conduct Workshop on Creating Asset Management Plans	11%	
Project Management and Reporting	59%	

Tasks Completed

Created the Save the Date Flyer and announcement for the Fall TAM Conference, posted to our website and emailed it out; reviewed CRA website materials for incorporation into the AM for LO presentation slides and attended the Houghton CRC monthly meeting with townships to learn how the county interacts with townships; took photos of local road damage for PASER slides and reviewed articles for PASER presentation trivia; completed July reporting and general project management.

Reporting Period: August 1 - 31, 2018

Project's Financial Summary

August Expense Reimbursement Submitted	\$2,355
Total Project Expense Reimbursements to Date	\$128,245
Contract Balance Available	\$106,289

Reporting Period: August 1 - 31, 2018

Monthly Project Progress Report

TAMC Activities 2018

September 17, 2018

Project Manager: Roger Belknap

MDOT Contract 2014-0952 Authorization Z15

Contract Dates: 10/01/2017 – 9/30/2018

Contract Amount: \$263, 946



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Reporting Period: August 1 - 31, 2018

Task	% of Budgeted Dollars Spent	Notes
Attend Council Meetings	42%	
Attend Committee Meetings	42%	
Culvert Pilot	107%	
Review Data Collection & QC Collection Results	25%	
Maintain Roadsoft-IRT Data Submission Protocols	54%	
Maintenance of PASER Training Cert. Testing Instruments & Records	14%	
Investment Reporting Project Cost and Treatment Life Study	117%	
Undefined Staff Support	25%	
Project Management & Monthly Reporting	125%	

Current Tasks Completed

Attended the Bridge Committee meeting via telephone; continued to work on the culvert pilot analyzing data and writing the report; worked on the ESL study by analyzing Roadsoft treatments and pulling together the MDOT let collection; set up test data for the IRT data submission protocols and worked on the annual report and testing; completed the July project reporting and general project management.

Project's Financial Summary

August Expense Reimbursement Submitted	\$71,310
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TAMC Activities 2018 Reporting for MDOT

Reporting Period: August 1 - 31, 2018

Total Project Expense Reimbursements to Date	\$217,019
Contract Balance Available	\$46,927